

GLOSSARY

TERMS

Absorption: The taking up of matter in bulk by other matter, as in the dissolving of a gas by a liquid.

Adsorption: The adherence of substances to the surfaces of bodies with which they are in contact, but not in chemical combination.

Advection: The process of transport of water, or of an aqueous property, solely by the mass motion of the fluid, typically via horizontal currents.

Aerobic: Requiring or existing in the presence of oxygen.

Agitation dredging: The removal of bottom material from a selected area by using equipment to raise it temporarily in the water column and allow water currents to carry the material away.

Anadromous: Those fish, such as salmon, steelhead, and shad, that ascend freshwater streams to spawn.

Anaerobic: Existing in the absence of oxygen; as opposed to aerobic.

Aquifer: Subsurface geological stratum containing water.

Bathymetry (bathymetric): The measurement of ocean depths in order to determine seafloor topography.

Beach nourishment: The process of replenishing a beach; use of sand to increase or improve beach area.

Bedforms: Ripples, waves, dunes, and related forms that develop under various flow conditions on the beds of alluvial streams with significant bedload transport.

Bedload: Sediment, usually sand size or larger, that is transported along the bed by rolling, skipping, dragging, or saltation.

Benthic macroinvertebrates: Large invertebrates found on or within bottom sediments and consisting largely of larval insects, worms, and related organisms.

Benthic organisms: Bottom-dwelling aquatic organisms.

Bioaccumulation: The uptake and incorporation of material into an organism as a result of its normal physiological processes.

Bioassay: Determination of the physiological effect of a substance by observing its effects on suitable living organisms under controlled conditions.

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Biological magnification: Increasing concentration of relatively stable chemicals as they are passed up a food chain from initial consumers to top predators.

Biota: Organisms inhabiting an ecosystem.

Brackish: Moderately saline.

Braided channel: A channel pattern characterized by numerous intertwined channelways.

Breakwater: A structure built into the sea to protect a shore area, harbor, anchorage, or basin from the action of the waves.

Circulation: The flow or motion of fluid in or through a given area or volume.

Climax community: A mature, relatively stable biotic community representing the culmination of ecological succession.

Community: All of the populations of plants and animals in an area or volume; a complex association usually containing both animals and plants.

Controlling depth: Actual minimum depth of a waterway at its shallowest point.

Design vessel: A hypothetical vessel which has characteristics of the largest and least maneuverable vessels that a project is designed to accommodate.

Diatom: The common name for silicon-containing algae.

Dispersion: The scattering of particles or a cloud of contaminants or foreign matter by the combined effects of shear and transverse diffusion.

Ebb tide: The portion of the tide cycle between high water and the following low water. Also known as a falling tide, with seaward currents.

Ecosystem: A community and its environment (living and nonliving) considered collectively the fundamental unit in ecology. May be quite small, as the ecosystem of one-celled plants in a drop of water, or indefinitely large, as in the grassland ecosystem.

EIS (Environmental Impact Statement): A statement required under NEPA which assesses the ecological, social, and aesthetic effects of a project or action upon the environment. Included in such a statement is a quantified assessment of the area before the project or action, a quantified assessment of the impacts anticipated from the action, a review of feasible alternatives to the action, a discussion of mitigating measures, a discussion of the short-term benefits versus long-term effects, and a discussion of those resources irretrievably lost by such action.

Epifauna: Surface-dwelling aquatic organisms.

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Estuary: A semienclosed coastal body of water that has a free connection with the open sea and within which seawater is measurably diluted with fresh water. Part of the river affected by tides; region of the river mouth where the fresh water of the river meets the saltwater of the sea.

Euphotic: Of or constituting the upper levels of the marine environment down to the limits of effective light penetration for photosynthesis.

Eutrophication: The process of a body of water becoming better nourished either naturally by processes of maturation or artificially by fertilization. Nutrient concentration and primary production tend to increase as eutrophication proceeds.

Extrapolation: Estimating a function at a point which is larger than (or smaller than) all the points at which the value of the function is known.

Flood tide: The portion of the tidal cycle between low water and the next high water; the highest tidal elevation; a rising tide.

Food chain: Animals linked together by predator-prey relationships and all dependent, in the long run, on plants.

Habitat: The physical location in which a population of plants or animals lives.

Hermatypic: Reef-building coral characterized by the presence of symbiotic algae within their endodermal tissue.

Hydrodynamics: The branch of physics dealing with the movements of water and other liquids.

Ice booms: Devices to restrict the movement of ice at critical waterway sites.

Infauna: Aquatic animals that live in the bottom sediment of a body of water.

Interpolation: A process used to estimate an intermediate value of one (dependent) variable which is a function of a second (independent) variable when values of the dependent variable corresponding to several discrete values of the independent variable are known.

Isobath: A contour line connecting points of equal water depths on a chart.

Jetty: A barrier built out from a seashore or riverbank to protect the land from erosion and sand movements, among other functions. Also known as groin, groyne, spurdiike, and wing dam.

Kinetic rate coefficient: A temperature-dependent variable that relates the concentrations of chemical compounds which are involved in a reaction.

Leaching: The removal of materials from a solid medium due to erosion or dissolution occurring because of the passage of water or other fluid through the medium.

Lentic: Of or pertaining to still waters, i.e., lakes.

Limnetic: Of, pertaining to, or inhabiting the pelagic region of a body of fresh water.

Littoral zone: Shallow-water area between the high- and low-water extremes.

Lotic: Of or pertaining to swiftly moving waters.

Low-flow augmentation: The release of water to increase flow in low-flow periods.

Minimum flow requirements: Lowest legal or traditional flows specified for a waterway.

Neap tide: Tide of decreased range occurring about every two weeks when the moon is in quadrature, that is, during its first and last quarter. Also known as neaps.

Nekton: Free-swimming organisms of open water, large and strong enough to be independent of turbulent water movement (fish).

NEPA (National Environmental Policy Act): A Federal policy enacted in 1969 and calling for an impact analysis of many major Federally funded actions which significantly affect the quality of man's environment.

Neritic: Of or pertaining to the region of shallow water adjoining the sea-coast and extending from low-tide mark to a depth of about 600 feet.

Neuston: Minute organisms that float or swim on the water surface.

Nitrification: A step in the nitrogen cycle technically involving oxidation of nitrogen, e.g. NH_3 from ammonia to nitrates (NO_3). Soil-dwelling (chemosynthetic) bacteria nitrify ammonia in two steps to nitrite (NO_2) and to nitrate (NO_3), in which form it is most available to plants.² Chemical reduction of nitrogen, as to N_2 , is denitrification.

Oxidation: A chemical reaction that increases the oxygen content of a compound that, hence, loses electrons.

Pelagic organisms: Midwater aquatic organisms, i.e., ones that never touch the bottom strata.

Periphytic: Pertaining to sessile biotal components of freshwater ecosystems.

Photosynthesis: Synthesis of reduced compounds using light energy, especially the manufacture of organic compounds (primarily carbohydrates) from carbon dioxide and a hydrogen source (such as water) with simultaneous liberation of oxygen by chlorophyll-containing plant cells.

Phytoplankton: Planktonic plant life.

Plankton: Small organisms (animals, plants, or microbes) passively floating in water; macroplankton are relatively large (1.0 mm to 1.0 cm); mesoplankton are of intermediate size; microplankton are much smaller.

Population: A group of organisms of the same species.

Pseudofeces: Coarse particles that accumulate at the edges of the palps of filter-feeding bivalve animals and are periodically thrown off by muscular twitches onto the mantle wall. This material never enters the gut and is expelled from the bivalve by spasmodic contractions of the adductor muscles.

RCRA: Resource Conservation and Recovery Act.

Reduction: A chemical reaction that decreases the oxygen content of a compound and, hence, that compound gains electrons.

Regression: A functional relationship between two or more variables that is often empirically determined from data and is used to predict values of one variable when given values of the others.

Revetment: A facing built on an embankment to prevent scour by weather or water.

Salmonid or salminoid: Collective term referring to salmon, trout, grayling, or white fish. All of these species prefer coldwater environments.

Saltation: Movement of sediment along a channel bed by intermittent bouncing.

Sediment basin: A basin constructed to trap sediment eroded from a slope or being transported by a stream.

Sessile: Permanently attached to the substrate.

Shear stress: Stress imposed on the streambed and banks by flowing water.

Shoaling: The reduction of water depth due to sediment deposition.

Similitude: Correspondence between the behavior of a model and its prototype.

Spring tide: Tide of increased range that occurs about every two weeks when the moon is new or full.

Stratification: In a body of water, layering of less dense water over underlying more dense water. Usually caused by salinity or temperature differences.

Substrate: Surface to which stream biota adhere or within which they live.

Suspended load: That portion of a stream's sediment load that is carried in suspension.

Thalweg: A line connecting the deepest points along a channel.

Trophic: Pertaining to, or functioning in, nutrition.

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Turning basin: An open area along or at the end of a waterway or harbor to allow vessels to turn around.

Water quality: An assessment of the condition of water in relation to some goal.

Water quality criteria: Statements concerning the limiting values for water quality parameters in light of a specific intended water use.